Supreme Court, U.S.
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No. ____

IN THE

Supreme Court Of The United States

OCTOBER TERM, 1997

SOFTEL, INC.,

Petitioner,

– v. –

DRAGON MEDICAL AND SCIENTIFIC COMMUNICATIONS, INC.; DRAGON GROUP LTD., also known as Dragon Medical and Scientific Communications, Ltd.; JOHN R. DARSEE, H. EUGENE HODGE, NINA ROMANOFF,

Respondents.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

CHARLA R. BIKMAN
Counsel for Petitioner
25 Maple Lane
East Hampton, N.Y. 11937
(516) 324-1306

36 pp.

QUESTIONS PRESENTED

1. Whether original source code expression in a computer software program can be denied copyright protection through the use of the Second Circuit "filtering" criteria which are not included in Sections 102(a) and 102(b) of the Copyright Act?

2. Whether the Second Circuit's application of its copyright "filtration" criteria to limit trade secret protection and its use of copyright damage formulas to minimize trade secret damages is a *de facto* preemption of state trade secret law in contravention of Section 301 of the Copyright Act and Congress' intent that computer software enjoy dual protection under state and federal law?

RULE 29.1 STATEMENT

Petitioner Softel, Inc. has no parent corporation and no subsidiaries which are publicly traded.

TABLE OF CONTENTS

QUESTION PRESENTED.....i

RULE 29.1 STATEMENT.....ii

TABLE OF CONTENTS iii

TABLE OF AUTHORITIES..... iv

OPINIONS BELOW..... 1

JURISDICTION 1

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED 1

STATEMENT OF THE CASE 1

A. Factual Background.....3

1. The Nature of A Computer Program.....3

2. Softel's Authoring Language Computer Program 4

3. Defendants' Use of the Softel Authoring Language 6

B. Legal Background.....7

C. Prior Proceedings in This Case.....18

3. In the District Court.....18

4. In the Court of Appeals.....22

REASONS FOR GRANTING THE PETITION.....25

I. THE COURT OF APPEAL'S DECISION DENYING COPYRIGHT PROTECTION TO ORIGINAL SOURCE CODE EXPRESSION BASED UPON ITS NOVEL "FILTERING CRITERIA" CONFLICTS WITH AT LEAST THREE CIRCUITS 27

II. THE CIRCUIT COURTS OF APPEAL ARE UNABLE TO REACH A CONSENSUS ON THE QUESTION OF IMPORTANT FEDERAL LAW DECIDED BY THE COURT OF APPEALS AND THEREFORE THE PUBLIC INTEREST REQUIRES THIS COURT'S REVIEW 29

CONCLUSION.....30

TABLE OF AUTHORITIES

Cases

Amstein v. Porter, 159 F.2d 464 (2nd Cir. 1946) 13

Apple Computer, Inc. v. Formula Int'l Inc., 725 F.2d 521 (9th Cir. 1984) 11

Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240 (3rd Cir. 1983), *cert. dismissed*, 464 U.S. 1033 (1984) 11, 27

Baker v. Selden, 101 U.S. 99 (1879) 9

Bateman v. Mnemonics, Inc., 79 F.3d 1532 (11th Cir. 1996) 28

Computer Associates Intern., Inc. v. Altai, Inc., 775 F.Supp. 544 (E.D.N.Y. 1991) 14, 15

Computer Associates Intern., Inc. v. Altai, Inc., 982 F.2d 693 (2nd Cir. 1992) . . .2, 3, 15, 16, 17, 19, 22, 26, 27

Computer Associates Intern. v. American Fundware, 831 F.Supp. 1516 (D. Colo. 1993) 20 n.20

Control Data Systems v. Infoware, Inc., 903 F. Supp. 1316 (D. Minn. 1995) 28

Data General Corp. v. Grumman Sys. Support Corp. 834 F.Supp. 477 (D. Mass. 1992) *affm'd and remand'd in part* 36 F.3d 1147 28

DSC Communications Corp. v. DGI Technologies, Inc., 898 F.Supp. 1183 (N.D. Tex 1995) 28

Gates Rubber Co. v. Bando Chemical Industries, Ltd., 9 F.3d 823 (1993) 28, 28 n.6

Feist Publications, Inc. v. Rural Tel. Service, Co., 499 U.S. 340 (1991). 10, 11, 17

Harper & Row Publishers, Inc. v. Nation Enterprises, 471 U.S. 539 (1985). 17

Lotus Development Corp. v. Borland Intern., Inc.
49 F.3d 807 (1st Cir. 1995) 27

Pioneer Hi-Bred Intern. v. Holden Foundation Seeds,
35 F.3d 1226 (8th Cir. 1994) 20 n.20

Ruckelshaus v. Monsanto Co.,
104 S. Ct. 2862 (1984) 24

SAS Institute, Inc. v. S & H Computer Systems, Inc.,
605 F.Supp. 816 (M.D.Tenn.1985) 12

University Computing Co. v. Lykes-Youngstown, Corp.,
504 F.2d 518 (7th Cir. 1974) 20, 23

Whelan Assoc. v. Jaslow Dental Laboratory,
797 F.2d 1222 (3rd Cir. 1986), *cert. denied,* 479
U.S. 1031 (1987) 4, 11, 15, 26, 27, 29

Vermont Microsystems, Inc. v. Autodesk, Inc.,
88 F.3d 132 (2nd Cir. 1996) 20

Constitutional Provision, Statutes and Public Laws

United States Constitution, art. I, Sec. 8, cl. 8 1

17 U.S.C. Sec. 101. 9

Sec. 102(a) 2, 8

Sec. 102(b) 2, 9, 10

Sec. 301(b)(1) 17

Sec. 301(b)(3) 17, 21

Sec. 410(c) 29

Sec. 504(b) 21, 25

28 U.S.C. Sec. 1254 1

Legislative Materials

H.R. Rep. No. 1476, 94th Cong. 2d Sess., *reprinted in*
1976 U.S. Code Cong. & Admin. News 5659 . . . . . .8, 10

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DavidNimmer & Melville B. Nimmer , 3 *Nimmer on Copyright*, Sec. 13.03 [F][1] 12, 13, 14

Restatement of Torts, Sec. 757, Comment b (1937) . .19 n.18, 23

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Jon S. Wilkins, *Protecting Computer Programs*. 104 Yale L.J. 435 . . . . . 3, 16 n.13

Softel, Inc. ("Softel") respectfully petitions for a writ of certiorari to review the judgment of the United States Court of Appeals for the Second Circuit in this case.

OPINIONS BELOW

The opinion of the Court of Appeals (App. A63-A87) is reported at 118 F.3d 955. The opinions of the District Court for the Southern District of New York are reported at Op. 87 Civ. 0167, 1992 WL 168190 (June 30, 1992)(John M. Cannella, J.)(App. A1-A42); and 891 F.Supp. 935 (Miriam G. Cedarbaum, J.) (App. A43-58); and amended Op. 87 Civ. 0167, 1995 WL 606307 (October 16, 1995)(App. A39-A62).

JURISDICTION

The Court of Appeals entered judgment on July 9, 1997. (App. A63). A motion for rehearing was denied on September 16, 1997. (App. A88) The jurisdiction of this Court is invoked under 28 U.S.C. Sec. 1254.

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

United States Constitution, art. I, Sec. 8, cl. 8.

> The Congress shall have Power . . . [t]o promote the Progress of Science and the useful Arts, by securing for limited Times to Authors . . . the exclusive Right to their . . . Writings. . . .

17 U.S.C. Sec. 101, 17 U.S.C. 102, 17 U.S.C. Sec. 106, 17 U.S.C. 301, 17 U.S.C. 410(c), 17 U.S.C. 504(b). The full text of the statutory provisions involved is set forth in the accompanying Appendix (App. A89-A97)

STATEMENT OF THE CASE

This case presents issues of fundamental importance concerning copyright protection for computer software and, in particular, whether original expression in computer software can be denied protection through the use of the Second Circuit's "filtering" criteria not included in 17 U.S.C. Secs. 102(a) and 102(b) of the Copyright Act.

It also presents the issue of *de facto* pre-emption, applying copyright filtration criteria to limit state trade secret protection and using copyright damage formulas to minimize trade secret damages, in contravention of Congress's intent in 17 U.S.C. 301 of

the Copyright Act to provide dual protection.

In Computer Associates Intern., Inc. v. Altai, Inc., 982 F.2d 693 (2nd Cir. 1992) ("Altai") the Second Circuit enunciated a general methodology, the Abstraction-Filtration-Comparison ("A-F-C") test, and specific "filtering" criteria for determining the copyrightability of the design and structure of a computer program.

In this case, decided seven days after Altai, the District Court applied the Second Circuit methodology and its novel "filtering" criteria to deny copyrightability to 70% (over 2000 lines) of Softel's original fixed expression in its source and object code. Defendants admitted copying this code and made no claims of independent creation.

The District Court gave no copyright protection to the design and structure of Softel's program, which in computer software is the most creative and intellectually demanding aspect of the work, because it found that the individual elements of that design are "mandated" by logic or efficiency, or are commonly used ways of realizing a computer program.

On appeal, the Second Circuit affirmed without comment the lower court's holding that 70% of the original fixed expression of Softel's program was unprotected by copyright and trade secret. It ruled that the District Court failed to apply the Altai analysis correctly to the interrelationship among the individual elements of Softel's program design. It remanded for findings only on whether the design and structure, like the plot and scenario of a play, was protectable copyright and trade secret expression under the Altai standards.

Congress intended that computer programs be protected by copyright law and that they enjoy the same scope of protection as other literary works. Under traditional copyright analysis of literary works there are only two limitations to protection: (1) the expression must be original and fixed 17 U.S.C. 102(a) and (2) it must not merge with the idea it expresses 17 U.S.C. 102(b). The traditional test of idea/expression merger is whether there is only one way to express the idea. If so, the expression is uncopyrightable. If there are alternative ways to express the idea, there is no merger and the author's choice of expression is protected from unauthorized copying.

The Altai "filtering" criteria applied in this case permit courts to deny copyright protection to original expression in a computer program even if there are alternative ways of expression, when that

expression is the most efficient means of accomplishing a task, Altai at 707 -8 or implements "mechanical specifications", "compatibility requirements", " computer manufacturer's design standards", "industry demands", or "widely accepted programming practices". *Id.* at 709-10

The Second Circuit filtering criteria reads new threshold requirements into the copyrightability provision in Section 102(a) and makes new law.

The Second Circuit's novel "filtering" criteria conflict with the Third Circuit, which employs the traditional idea/expression merger test to both the original fixed expression in the computer program's source and object code, and to the program's overall design and structure. The First Circuit rejected use of the Second Circuit's "filtering" criteria to determine copyrightability of the visual display of menus and commands by a computer program. The Eleventh Circuit adopted the Second Circuit's "filtering" criteria as "traditional challenges" to the copyrightability of a computer program's source and object code even where defendants admit copying. The Tenth Circuit modified the abstractions step in the A-F-C analysis to require determining the purpose of the program and examining the design and structure of the program as a whole and not just its details. There is no consensus among the circuits.

Because all computer programs strive for "efficiency and logic", indeed those characteristics are the hallmark of intellectually superior programs, and all computer programs implement "common programming techniques", "design standards", etc., it is now unsettled as to what rights or protection a software developer has left Jon S. Wilkins, Protecting Computer Programs, 104 Yale L. J. 435. Such ambiguity, unless checked, only serves to encourage blatant theft of software. In this case, the infringer was not a professional computer programmer and his copying was willful. (App. A39-A40)

Absent review from this court, the Second Circuit's vague and amorphous "filtering" criteria will continue to permit original fixed expression to be denied copyright protection. This was not the intent of Congress.

A. FACTUAL BACKGROUND

1. The Nature of Computer Programs

Once a computer program has been designed and its structure determined, a programmer codes the program structure into the

source code of a programming language and conveys the instructions to the computer. Whelan Assoc., Inc. v. Jaslow Dental Laboratory, Inc., 797 F.2d 1222, 1230 (3d Cir. 1986) *cert. denied*, 479 U.S. 1031 (1987) ; 17 U.S.C. Sec. 101

In this process, source code is the tangible fixed medium of expression used by the author of the work. It is then converted ("compiled") into binary object code, the numeric language of computers. Many object code modules may be combined together into a finished program. This binary form of the finished computer program through which a computer receives its instructions is called an executable.

There are two main kinds of computer programs. The most common are called applications programs which perform specific functions, like word processing or game playing or browsing the Internet. The other type are operating system software which control the computer hardware functions and permit the application programs to interact with the computer hardware. One can distinguish which category a computer program falls into by looking at the purpose of the program.

Application programs are distributed in the machine readable executable form only. The source code written by the programmer remains in the possession of the author as a trade secret and is not disclosed by distribution of the executable. The executable program cannot be modified or enhanced without the original source code. It does not reveal to the user the source code instructions or the organization and the interaction of the program's underlying code modules. Because the source code reveals all of these things and can be modified, enhanced, and used to create new products with new functionality without starting from scratch, it is the foundation of the software developer's business. The source code is the developer's key asset, the source of the business's competitive advantage, and is always maintained as a trade secret.

2. Softel's Authoring Language Computer Program

Softel's computer program at issue in this case is a type of application program ("Authoring Language") used for creating interactive computer based multi-media presentations. An interactive presentation is one in which the viewer of the presentation controls the order in which the information is presented. A multi-media presentation is one which combines text, computer graphic images, photographic images, video and sound. Softel's Authoring Language enables someone familiar with a word

processor but with no computer programming skills to put together an interactive multi-media presentation.

In Softel's Authoring Language, English language commands were written outside of the code of the program in an external file. The computer program read the commands and triggered the execution of specific modules of computer code. For example, if the scriptwriter wrote the command GRAPHICS BLUESKY, the Softel Authoring Language triggered execution of a specific module of computer code to present the viewer with a display of a computer image of a blue sky.

The Softel Authoring Language was developed by Softel's president, Paul Fiondella ("Fiondella"). Fiondella had worked in the computer industry since 1973, including positions at prestigious facilities such as the New York Institute of Technology, one of the nation's foremost computer animation centers, and AT&T's premier research facility, Bell Laboratories. He has a Masters degree in film research and animation from New York University. Fiondella formed Softel in 1981 to develop software products for the newly introduced IBM PC. (App. A120-A121)

The Authoring Language was the third in a series of Softel graphics oriented products. Softel's first product, VIDEOGRAM 1.0 was released in January, 1983. Described by PC Magazine as a pioneering breakthrough, it allowed an artist to create professional quality color images and display them on the computer screen or output them to 35 mm slides.

To increase the speed and functionality of VIDEOGRAM 2.0, Softel's second product, a library of high performance computer graphics routines was created. (App. A118-119) After Fiondella designed the program structure and the proprietary formats for the image and font data files, Softel programmers wrote the code. The development of the Softel library of graphic subroutines took more than a year. VIDEOGRAM 2.0, released in September 1984, was favorably reviewed in the trade press for its speed and performance

The final graphics library consisted of 31 subroutines grouped into subprograms written in the MACRO ASSEMBLER programming language ("ASSEMBLER") together with other modules written in BASIC. Development costs for the Softel graphics library were $238,768.50 (App. A129)

Fiondella designed the graphics library to be used and re-used to construct diverse software applications.

The next use of the complete graphics library was in the Softel Authoring Language, in the spring of 1985. For VIDEOGRAM 3.0, released in the fall of 1985, Softel modified this core technology to run on the newly released IBM Enhanced Graphics Adapter ("EGA") board. PC Magazine described VIDEOGRAM 3.0 in an October 1985 review as one of the few products which "exploits the new IBM graphics board to the fullest of its potential".

3. Defendants' Use of the Softel Authoring Language

John R. Darsee ("Darsee') was a medical scriptwriter for Dragon Medical and Scientific Communications, Inc ("Dragon"), a medical marketing company. (App. A2) He was not a computer programmer. In 1983, Darsee, who claimed to have performed original medical research, was found by the National Institutes of Health to have committed fraud and was barred from participating in government funded research for ten years.(App. A98-100,A130-132)

In December, 1984, Dragon obtained a contract to prepare three interactive videodisc presentations on cancer treatment: "Melanoma", "Kaposi Sarcoma" ("Kaposi")and "Hairy Cell Leukemia" ("Hairy Cell"). (*Id.* A6) Softel licensed to Dragon the use of the Softel Authoring Language executable program on a per project basis. The first use was in the "Melanoma" videodisc project completed in May, 1985 and the second use was in the Kaposi project in early June, 1985. (*Id.* A8, A9)

In late June, 1985, Darsee willfully stole the source code for the Kaposi program and the object code modules containing the Softel graphics library. (Id. A12)

On June 27, 1985, after the success of the two projects which used Softel's Authoring Language executable program, Dragon began work on the third project in the series, the Hairy Cell Leukemia program. Darsee admitted that he used the stolen Softel source and object code to create the Hairy Cell Leukemia program delivered to the client in its final version on March 12, 1986 ("Hairy Cell Roche") (App. A13-A14) He testified that he copied into Hairy Cell Roche the Softel routines written in the BASIC computer language for touch screen interaction, for videodisc interaction, for timing, and image retrieval. (App. A103-A105). Dragon's expert testified that 27 Softel assembly language routines from the Softel graphics library were copied verbatim into Hairy Cell Roche. When Darsee copied the Softel code into Hairy Cell Roche he deleted the Softel copyright notice. (App. A28) Darsee destroyed the source code for Hairy Cell Roche thus preventing a line by line comparison

of the source code of the two programs. (App. A105, A48 n.4)

Darsee also admitted that he used the stolen Softel Authoring Language source code to create "Heart Lab Interactive" completed in March, 1986 and "Low Back Pain" completed in May, 1986 . (App. A14) He copied verbatim Softel timer, touch screen, and image retrieval routines into the programs. (App. A101-2.)Dragon's expert testified that Softel assembler routines were copied verbatim into Heart Lab and Low Back Pain. (App. A111) Darsee deleted the Softel copyright notice from the copied source code . (App. A28)

After commencement of this litigation, Darsee continued to produce Dragon's post-litigation interactive computer programs.[1]

From January, 1987 to the exchange of final expert reports in May-July, 1989, Darsee produced the following post-litigation programs: "Unasyn", "Micro", "Obgyn", "Heart Command", and "Managed Care" [2]

With the stolen source code Dragon had all of Softel's copyright and trade secrets which Softel spent over $238,000 to develop and with them, garnered contracts with gross earnings of over $1,000,000. Dragon and Darsee stole the source and object code for Softel's Authoring Language and library of graphics routines for purely commercial reasons.

B. Legal Background

The founding fathers, many of whom were authors and inventors, provided in the Constitution of the United States that:

> The Congress shall have Power . . . [t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors . . . the exclusive Right to their respective Writings.". U.S. Const. art. I, Sec. 8, cl. 8.

Thus, the original intent of the founding fathers was to

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[1] Dragon did not attempt to create a "clean room" to develop the post litigation programs independent of and without access to the stolen Softel Authoring Language nor did they claim independent creation. Dragon's expert testified that the post-litigation programs "evolved" from the Softel Authoring Language used in Kaposi, and that the similarities between these later programs and the Softel copyright registration were the result of that evolution. (App. A116-A117)

[2] After the exchange of expert reports, Dragon delivered four more programs: "Advanced Cardiology Lab", "Expert Consults", "Unasyn Oral Follow-up", and "Benign Prostatic Hypertrophy" and continued to produce programs from the close of discovery January 31, 1990 until Dragon's dissolution in 1992.

guarantee in the Constitution the exclusive right of an author to control his or her work. The first copyright statute, enacted in 1790, designated "maps, charts and books" as copyright subject matter. [3] Historically, the Copyright statute does not limit the copyright owner's rights or protection based on the work's utilitarian or functional nature.

The latest comprehensive revision of the Copyright statute is the Copyright Act of 1976, 17 U.S.C. 101 *et seq*. At that time Congress refined its definition of what is protected by copyright to reflect technological advances in the medium of expression and to expand the categories of protected works. It created Section 102(a) which provides that:

> Copyright protection subsists . . . in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced or otherwise communicated either directly or indirectly or with the aid of a machine or device. 17 U.S.C. Sec. 102(a)

The legislative history makes it clear that this definition was intended to include computer programs.

> The term "literary works" does not connote any criterion of literary merit or qualitative value: it includes catalogs, directories and similar factual, reference, or instructional works and compilations of data. It also includes computer data bases, and computer programs to the extent that they incorporate authorship in the programmer's expression of original ideas, as distinguished from the ideas themselves. House Report at 5667.

Concurrent with the revision of the Copyright Act, Congress and the President established a commission, The National Committee on Technological Uses of Copyright, ("CONTU") to assist them in developing a national policy for both protecting the rights of copyright owners and assuring public access to copyrighted works when they are used in computer systems. In 1978, CONTU issued its final report recommending copyright as the most effective legal mechanism to achieve the national goals of protection and dissemination of computer programs. CONTU explained that because the cost of developing computer programs is great,

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[3] (H.R.Rep.No.1476, 94th Cong., 2d. Sess. at 54 ("House Report") *reprinted in* 1976 U.S. Code Cong. & Admin. News, 5659,5665.

"computer programs . . . are likely to be disseminated only if ... [t]he creator can spread its costs over multiple copies of the work with some form of protection against unauthorized duplication" CONTU Report at 5,26, and 27.

CONTU recommended that Congress include computer programs in its list of examples of literary works protected by copyright. Tracking verbatim CONTU's recommendation, Congress amended 17 U.S.C. Sec. 101 in 1980 to add:

> A "computer program" is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result.

Concluding that the Copyright Act of 1976 provided adequate protection, CONTU did not recommend any statutory changes with respect to copyrightability of computer programs. In arriving at this conclusion, CONTU explained 17 U.S.C. 102(b) and Baker v. Selden, 101 U.S. 99 (1879) as they applied to copyright protection of computer programs. Noting that 17 U.S.C. 102(b) provides a description of what may not be copyrighted i.e. — ideas, procedures, processes, systems, methods of operation, concepts, principles or discoveries, it stated that Baker v. Selden

> . . . makes the distinction between [computer] programs and processes in the copyright sense relatively easy to articulate. In Baker v. Selden the Supreme Court held that a valid copyright in a book describing a system of accounting, . . . did not bar others from using that accounting method ... [4] CONTU Report. at 49

The "idea" of the accounting system was not copyrightable; however, the fixed original expression of the book describing that accounting system was protectable expression that could not be copied without the author's permission. *Id.*

Congress adopted the CONTU analysis, stating that:

> Section 102(b) ... is intended, among other things, to make clear that the expression adopted by the programmer is the copyrightable element in a computer program and that the actual processes or methods embodied in the program are

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[4] This holding is often misconstrued as imposing a limit on the copyrightability of works which express ideas, system or processes. As Professor [Melville] Nimmer observes, 'the rationale for the doctrine of Baker v. Selden in no event justifies the denial of copyrightability to any work." *Id.* at n. 115

not within the scope of the copyright law.

> "Section 102(b) . . . in no way enlarges or contracts the scope of copyright protection under the present law. Its purpose is to restate, in the context of the new single Federal system of copyright, that the basic dichotomy between expression and idea remain. House Report at 57, 6570

Thus, both CONTU and Congress made it clear that expression adopted by a computer programmer is protected: the fact that the expression embodies or implements ideas, methods of operation, or procedures does not make the expression uncopyrightable within the meaning of 17 U.S.C. 102(b) and cannot justify extinguishing protection for that expression.

The general rule embodied in Section 102(a), that original fixed expression in a literary work such as a computer program is protected, is subject to two exceptions. CONTU explained these as the "insufficient intellectual labor" and the "idea-expression identity"[5] exceptions.

> The "idea-expression identity" exception provides that copyrighted language may be copied without infringing when there is but a limited number of ways to express a given idea. This rule is the logical extension of the fundamental principle that copyright cannot protect ideas. . . . In the computer context this means that when specific instructions, even though previously copyrighted, are the only and essential means of accomplishing a given task, their later use by another will not amount to an infringement. CONTU Report at 30

The "insufficient intellectual labor exception" was addressed in Feist Publications, Inc. v. Rural Telephone Serv. Co., 499 U.S. 340, 347-8 (1991). This court explained that:

> "Original" as the term is used in copyright means only that the work was independently created by the author (as opposed to copied from other works), and that it possesses . . . some creative spark, "no matter how crude, humble or obvious" it might be. . . . . Originality does not signify

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[5] The "idea-expression identity" exception is also described as the "idea-expression merger doctrine". The latter is used herein interchangeably with the CONTU terminology.

novelty; a work may be original even though it closely resembles other works so long as the similarity is fortuitous, not the result of copying.

Feist makes clear that once an expression meets the minimum originality standard, it is copyrightable unless there is "merger" of the expression with the "idea" because there is only one means of expressing that idea.

As anticipated by CONTU, powerful computers for small business and the home were introduced and proliferated CONTU Report at 65. In Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240 (3rd Cir. 1983) defendant Franklin challenged the copyrightability of the set of statements or instructions comprising Apple's proprietary computer program to operate its industry standard Apple II personal computer. Franklin argued that the entire operating system program's expression was uncopyrightable "process," "system", or "method of operation" 714 F.2d at 1250-52 so that Franklin was free to copy it to create a competing Apple "clone" computer. The court applied the idea/expression distinction and merger analysis by taking evidence on whether other methods existed to create a computer program that would operate the computer. Finding that alternative expressions existed, the court ruled that the particular set of instructions Apple had created to express the idea of an "operating system" was expression distinct from the idea and was therefore copyrightable.[6]

In Whelan Assoc., Inc. v. Jaslow Dental Laboratory, Inc., 797 F.2d. 1222 (3rd Cir. 1986), *cert denied*, 479 U.S. 1031 (1987), the defendant challenged the copyrightability of the design and structure of the plaintiff's application program for aiding the business operations of a dental laboratory.[7] Jaslow argued that copyright protection was limited to literal elements of computer programs-- its source and object code. Thus, similarities in the design and structure of the code could not be the basis for finding that defendant's program was substantially similar to plaintiff's.

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[6] The Ninth Circuit adopted the Apple analysis to reach the same conclusion in Apple Computer, Inc. v. Formula Int'l Inc., 725 F2d. 521, 523-25 (9th Cir. 1984)

[7] Jaslow claimed "independent creation" of his similarly functioning program. The District Court found that Jaslow had surreptitiously obtained access to the source code for Whelan's program. Thus the court had to determine whether the programs were substantially similar to infer copying as a factual matter. Because Jaslow wrote his program in a different computer language, there was no identical source or object code. The similarities were in the design and structure of the programs.

The Third Circuit ruled that copyright law affords protection from copying of a computer program's structure on the same basis that copyright protects the plot or scenario of a literary work, not just the actual text or dialogue. Jaslow countered that the structure of a computer program (as distinguished from other literary works) was unprotected "idea" and not the expression of the idea and therefore was denied protection under Section 201(b). *Id.* at 1239-1240.

In addressing this issue, the Third Circuit articulated the traditional idea/expression merger test for distinguishing uncopyrightable idea from copyrightable expression. It concluded that the purpose or function of a utilitarian work is the work's idea. Where there are various means of achieving the desired purpose of the program, then the particular means chosen is not necessary to that purpose; hence there is expression, not idea *Id.* at 1236.(In accord: SAS Institute, Inc. v. S & H Computer Systems, Inc., 605 F.Supp. 816 (M.D.Tenn.1985)) The Third Circuit explained:

> The rule proposed here, which allows copyright protection beyond the literal computer code, would provide the proper incentive for programmers by protecting their most valuable efforts, while not giving them a stranglehold over the development of new computer devices that accomplish that same end. (Whelan at 1237)

After determining that the structure and design of Whelan's program was copyrightable expression, the court compared each of the similar design elements of the two programs. The Third Circuit noted that Whelan's file structures were complex and detailed and that one could have used sufficiently different file structures to accomplish the program's purpose. It found elements of Jaslow's program to be substantially similar to plaintiff's and that the copied elements constituted infringement.

In or about 1989. David Nimmer, Esq., ("D. Nimmer") successor author to the treatise Nimmer on Copyright[8] endorsed the "Abstraction-Filtration-Comparison" ("A-F-C") test as an alternative to the Whelan analysis for determining infringement. In the A-F-C analysis, the court must perform an "abstractions test", starting by examining the words and lines of computer source code, proceeding then to the combination of those lines of code into

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[8] Melville B. Nimmer, the originator of the treatise died in 1985. Melville B. Nimmer and David Nimmer, 3 Nimmer on Copyright Sec. 13.03[F] (1997)("D. Nimmer")

routines, modules, and sub-programs, then examining the manner in which these elements relate to and interact with one another, filtering out uncopyrightable expression at each level of abstraction up to the purpose of the program. After this filtration, the court compares the remaining copyrightable elements in plaintiff's work with defendant's work to determine if any have been copied,and if so, whether the copying qualitatively or quantitatively constitutes an "illicit appropriation".[9]

The key component of the A-F-C test are the "filtering" criteria promulgated by D. Nimmer. These criteria enable a court to deny copyright protection to original expression within a computer program and depart from the established limiting principles of originality and idea/expression merger contemplated by CONTU and Congress.

D. Nimmer posits that original source code or object code or program design can be copied with impunity if the copied element is "dictated" by logic and efficiency. *Id.* at 128-9 Under this rationale, the creative programmer with the insight and intelligence to design a program or a program element that is more logical or more efficient than others is entitled to no protection from unauthorized copying. Presumably, illogical and inefficient code is still protected. Under the traditional idea/expression merger test, code or design expression that is more "logical" or "efficient", given the existence of less logical and efficient alternatives, could not be filtered out.

D. Nimmer also posits that original expression "dictated" by "external considerations", i.e. hardware, software, or computer manufacturer design standards, or original expression implementing common programming techniques may be denied copyright protection. Id. at 130-137 D. Nimmer does not restrict his "filtration" to specific lines of code provided by a manufacturer or in a computer text book. Those lines of code would be excluded as not original if copied by the programmer. D. Nimmer argues more broadly that where the programmer chooses to implement general

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[9] D. Nimmer advocates that the A-F-C test be used to determine "illicit appropriation". He condones its use where defendants admit copying to determine whether their use is to be excused. Id. at 13-113 D. Nimmer also advocated abandonment of the traditional "Lay Observer Test" for determining the legal conclusion of "illicit appropriation" cf. Arnstein v. Porter, 154 F2d. 464 (2nd Cir. 1946) and permitting expert testimony on all findings on the "A-F-C" test, including the legal conclusion of infringement.

information into original expression, that expression can be denied copyright protection and copied without the programmer/author's permission.

D. Nimmer's discussion of "external considerations" and "common programming techniques" blurs the distinction between the defense of "independent creation" where defendants deny copying and allege that similarities are fortuitous or the result of reliance on common sources, and the defense of "uncopyrightability" where defendants admit unauthorized copying and seek to avoid liability. *Id.* at 13-136, 137 cf. *Id.* at 142-143

Under the traditional idea/expression merger doctrine, the copyrightability of the programmer's original expression can be extinguished if it is the only expression possible for implementing those "external considerations". Nimmer appears to suggest that mere expert proclamations that original expression is "dictated" by logic, efficiency, or "external considerations" is sufficient to extinguish the software developer's copyright protection. *Id.* at 13-124

D. Nimmer posits that original expression implementing "common programming techniques" is filtered out as uncopyrightable. Under established principles articulated in Feist, if two programmers employ common sources to arrive at similar implementations of the problem through their own independent efforts, copyright is not denied leaving others free to copy directly from them. On the contrary, both works are original and therefore copyrightable. Feist at 345-46

In Computer Associates Int'l., Inc. v. Altai, Inc., 775 F.Supp 544 (E.D.N.Y. 1991) Altai admitted that a former Computer Associates ("CA") employee had taken CA's source code and copied 30% of it into Altai's competing program. The District Court did not apply the A-F-C test or the D. Nimmer "filtering" criteria to determine infringement because Altai's admission was direct evidence of copying of a substantial amount of CA's source code. *Id.* 560

After commencement of the litigation, Altai claimed that it independently created a second version of its program which expunged the CA code. Altai claimed that the eight employees writing the second version did not take advantage of the CA source code nor have any contact with the employee who did. CA alleged

that Altai's second version, the "clean room"[10] version, although not duplicating CA code, copied the structure of the CA program.

Based upon Altai's claim of independent creation, the District Court adopted the "A-F-C" test and applied D. Nimmer's "filtering" criteria as the analytical method or test to determine "factual" or "probative" similarity. It proceeded to filter out from CA's program as "uncopyrightable" each of the program elements found in both programs based on "demands of functionality", Id. 560, 561,[11] or "taken from the public domain" Id. 561. The court described the program's design and structure as "so simple and obvious to anyone exposed to the operation of the program" that it was uncopyrightable as well. *Id.* 562. After extinguishing copyright protection for each of the similar elements, the court found that nothing copyrightable was copied. Thus, Altai's second version was not substantially similar and was the result of independent creation through Altai's "clean room effort". *Id.*

The Second Circuit affirmed the District Court's analysis. It criticized Whelan as "overbroad" for failing to recognize that there are many ideas in a program, for example in a program's routines and subroutines, however, it did not explain why the traditional idea/expression merger test could not be applied at each level of abstraction to determine copyrightability. Computer Associates Intern., Inc. v. Altai, Inc., 982 F.3d 693, 705 (2nd Cir. 1992)

The Second Circuit decision is based on a fundamental misconception that copyrighted works that are utilitarian and

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[10] Once there is access and an admission of copying, the presumption, absent a clean room, is that similarly functioning subsequent works created by the same infringer cannot have been independently created. Stephen J. Davidson Reverse Engineering and the Development of Compatible and Competitive Products under United States Law, 10th Annual Computer Law Institute 407, 432 (1988), Practicing Law Institute.This case demonstrates the benefit of saved development costs that accrues from software piracy. It took one programmer three months to create the infringing program, but it took eight programmers six months to create the second version.

[11] The Altai "external factors" are: (1) mechanical specifications of the computer; (2) compatibility requirements to work with other programs; (3) computer manufacturer design standards; (4) demands of industry services; (5) programming practices. The court expands the definition of "public domain" beyond material dedicated to the public by publication without copyright notice or expiration of the copyright and includes as "public domain" material that " is freely accessible through program exchanges" ignoring whether that material is itself copyrighted. *Id.* at 709-10

functional are entitled to less protection than copyrighted works that are purely aesthetic.[12] Yet the *sine qua non* of copyright is the protection of the original intellectual labor. Congress made no distinction in the scope of protection between original works that accomplish a purpose, such as a computer program, and useless original works which are purely aesthetic.

The Second Circuit based its rationale for adopting the D. Nimmer filtering criteria on a misperception of the process of developing commercially viable computer programs.

Specifically, it adopted D. Nimmer's thesis that while theoretically there are myriad ways to design a program, as a practical matter there are a limited number of ways and that the Third Circuit in Whelan, and the cases Whelan relied upon, were based upon an "outdated appreciation of computer science." [13] The position of D. Nimmer, a lawyer, directly conflicts with the findings of CONTU which concluded that "computer programs are the product of great intellectual effort and their utility is unquestionable" CONTU Report at 27 and that "the availability of alternative non-infringing language is the rule rather than the exception", citing, *inter alia*, testimony of Dan McCracken, then Vice President of the Association of Computing Machine. *Id.* at 51, 51 n. 123.[14]

The Second Circuit rationalized its reduced copyright protection for computer programs as opposed to other literary works on the policy ground that copyright law "must appropriately limit the extent of that protection so as to avoid the effects of monopolistic stagnation." *Id.at* 696 and a concern that "first comers [will be able]

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[12] CONTU rejected this notion, stating that copyright has never been denied to works simply because of their utilitarian aspects CONTU Report at 53 and that denying copyrightability to a writing because it is used in conjunction with a computer contravenes sound policy that courts may not impose a standard of literary or artistic merit to determine copyrightability. *Id.* at 63-4

[13] Cf. Wilkins. 104 Yale L. J. 435, 465-7 Historically, programs have been created in numerous and diverse manners, a fact which does not fit Nimmer's assumption of how programs are constructed.

[14] Dan McCracken testified that there are an infinite number of ways in principle to produce a computer program, and in practice dozens or hundreds. He stated that it is not true that there is a very restrictive way to write a program. When asked specifically about a "compiler program" and whether there were an infinite number of way of writing programs to do that particular job, McCracken responded "yes.... There are hundreds of [different] compiler [programs for] going from FORTRAN to some machines.... CONTU Report at page 51 n. 123)

to "lock up" basic programming techniques as implemented in programs to perform particular tasks" *Id.* at 712 The Second Circuit reasoning ignores the fact that many implementations, not one, may result from gaining a basic understanding of programming techniques. Copyright does not grant a monopoly against those who go to the same sources to gain an understanding of basic programming. Independent creation is a complete defense. Feist Publications, Inc. v. Rural Telephone Serv. Co., 499 U.S. 340, 346 (1991), Harper & Row Publishers, Inc. v. Nation Enterprises, 471 U.S. 539, 546 (1985). Thus the "first comer" cannot prevent others from independently implementing common programming techniques.

CONTU addressed the issue of monopolistic stagnation by recommending broad copyright protection CONTU Report at 5, stating that "The possibilities provided by the technology are virtually limitless . . . dependent only on the ingenuity employed in developing the programs . . . and the willingness of creators of such works to disseminate them at reasonable prices". *Id.* at 66. It concluded that the willingness of the program developers to disseminate their works was dependent on broad protection against unauthorized copying. *Id.* at 26, 27

The Second Circuit also addressed in Altai the interface between copyright and trade secret protection. It acknowledged that Section 301 of the Copyright Act, does not preempt a claim of misappropriation of trade secret:[15]

> Precisely because trade secret law covers the discovery of ideas, processes and systems --explicitly excluded from coverage under copyright law--courts and commentators alike have considered it to be a necessary and integral part of the intellectual property protection extended to computer programs. Altai, 982 F.2d at 717

Reversing the lower court's dismissal of CA's trade secret claim on preemption grounds, the Second Circuit remanded for findings and calculation of damages under trade secret law for both Oscar 3.4 - which infringed CA's copyright-- and Oscar 3.5 which did not. The court noted in dicta that the trade secret damages for Oscar 3.4 might be co-extensive with the copyright damages of $364,444 which were based upon CA's lost sales and Altai's net profits on

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[15] See also: H.R. Rep. No. 1307, 96th Cong., 2d. Sess., reprinted in 1980 U.S. Code Cong. & Admin. News 6460, 6482-3

sales of the infringing version. If so, then CA would receive only one recovery.

C. Prior Proceedings in this Case

1. In the District Court

The District Court, Judge Cannella, held a trial on the liability issues April 23 - May 13, 1991. On June 22, 1992, The Second Circuit issued its initial decision in Computer Associates Int'l., Inc. v. Altai, Inc. (amended December 22, 1992 as to the trade secret claim).

Citing the A-F-C test and Altai "filtering" criteria as "settled law", Judge Cannella found that of Softel's 101 page computer program that Defendants stole, only the "image retrieval routines", which the court illogically described as "five assembler routines", were protected expression. (App. A15, A25) The remaining 70% of Softel's source code that Defendants admitted copying was "filtered" out without a clear explanation[16].

Softel's copyright claim was for the infringement of all of the expression in its Authoring Language application program and the trade secrets contained in the program's source and object code.

The court identified individual elements of Softel's Authoring Language in the Darsee-created post-litigation programs. Applying the Altai "filtering criteria" to the idea of using menus, external files, English language commands and modular sub-division, the court proclaimed these elements to be either "common programming techniques" or "mandated by logic" or "efficiency" and denied copyright protection to all of the underlying code and the design and structure implementing these "ideas".

The District Court's application of the Altai "filtering" criteria to extinguish copyright protection to 70% of Softel's copyright registration went beyond Altai's application in several important ways: (1) It "filtered" out all of the source code copied verbatim by defendants that implemented the design structure in Softel's

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[16]The uncontroverted evidence established verbatim copying of 18 source code routines written in BASIC and taken from the Authoring Language: "Load Pix to Buffer"; "Move Plane"; "Show Pix"; "Restore Image"; "Select Font"; "Convert Text"; "Font Char"; "Choose Option"; "Print String"; "Print Char"; "Null Command"; "Cycle Wait"; "Send Frame"; "Search"; "Stop At"; "Play Segment"; "Show Still"; "Timer". Defendants' expert admitted verbatim copying of an additional 26 object code routines written in ASSEMBLER from Softel's graphics library. (*Id.* A109-10, A127)

Authoring Language based upon defendant's expert's testimony that the idea of using these elements were "common","efficient" or "logical"; [17] (2) it "filtered" out all of the design and structure of Softel's program by identifying the "idea" of each design element individually, declaring it a "common idea" or "common programming technique" without examining the originality and therefore copyrightability of the combination of those elements into a commercially viable program for creating interactive multi-media presentations; (3) it applied the "filtering" criteria where defendants admitted verbatim copying and did not claim independent creation of the post-litigation programs in a "clean room"; and (4) it used the copyright "filtering" criteria to deny trade secret protection[18] to over 70% of Softel's trade secret source and object code; [19]

Judge Cannella noted that, although it is settled law that source and object code and a computer program's structure are copyrightable, the issue for the court is the scope of that protection. (App. A29) The District Court recognized the Second Circuit's new policy of narrowing copyright protection of original fixed expression in computer software and rephrased the elements of Softel's copyright claim as (1) ownership of a valid copyright and (2) impermissible copying of the copyrighted work. (*Id.* A21) The District Court correctly perceived the Altai "filtering" criteria as a mechanism for permitting copying of original fixed expression in a computer program and thereby minimizing or extinguishing the liability of those who intentionally pirate software.

In 1994 Judge Cannella transferred this case to Judge Miriam G. Cedarbaum who held the damages trial from May 8 to 12, 1995.

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[17]The District Court precluded Softel from presenting direct or rebuttal testimony by Dr. Thomas DeFanti, a renowned expert in authoring languages and computer graphics because Softel was unable to deliver his report within a 16 day deadline imposed by the magistrate who then refused a request for a 30 day extension.. (App. A113, A69))

[18] Trade secret protects uncopyrightable "idea" "method" and "process" and any information maintained as a secret and used in one's business to provide a competitive advantage over those who do not possess it. Restatement of Torts Sec. 757 cmt. b. (1937) Trade secret prohibits any commercial use of the secret, not just copying.

[19] Dragon's expert testified that the similarities in design structure in the Darsee/Dragon post-litigation programs and Softel's Authoring Language were the result of the fact that Dragon's programs "evolved" from the stolen Authoring Language (referred to by the expert as "Kaposi"). (App. A114-17))

Judge Cannella's findings of fact established that Softel had delivered only the executable code form of its Authoring Language to Dragon for use on a per project basis. (App. A8-A9). Fiondella had refused to show Dragon the source code for Softel's program, and had at all times maintained the secrecy of the code. (App. A11, A22) Darsee obtained access to the Softel source code by improper means.(App. A10-A12)

At the damages trial, three methods of calculating defendant's benefit under trade secret law were presented: (1) defendant's profits; (2) defendant's saved development costs measured by plaintiff's actual development costs; or (3) a reasonably royalty for an unrestricted source code license.

Softel argued that a reasonable royalty for an unrestricted source code license was the proper and largest measure consistent with Defendants extensive exploitation of the stolen Softel source code. Michael Rosenhouse, Annotation, Proper Measure of Damages and Elements of Damages for Misappropriation of Trade Secret, 11 A.L.R. 4th 12 (1982).[20] See University Computing Co. v. Lykes-Youngstown Corp., 504 F.2d 775 (7th Cir. 1974); In accord; Vermont Microsystems Inc. v. Autodesk, Inc., 88 F3d 132 (2nd Cir.1996) [21]

The District Court acknowledged that the larger measure of damages is generally awarded. The Court concluded that defendant's profits were the larger measure. It reached this erroneous conclusion by finding that a reasonable royalty to compensate for theft of Softel's trade secret source code would be the same as an executable license fee. (App. A53 n.5), stating:

> [T]he reasonable royalty . . . measure [for theft of trade secret source code] . . . would be essentially the same as the lost profits measure conducted for the copyright

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[20] Where there are alternative methods of damage calculation, plaintiff is entitled to the largest recovery available. Computer Associates Intern. v. American Fundware, Inc., 831 F.Supp. 1516 (D.Colo. 1993); Pioneer Hi-Bred Intern. v. Holden Foundation Seeds, Inc., 35 F.3d 1226 (8th Cir. 1994).

[21] Plaintiff's expert testified that the value of an unrestricted source code license was plaintiff's development costs times a multiplier of 3.5 to 5.5. Its second expert gave an example of a restricted source code license that prohibited including the source code in other products and was nevertheless 70 times greater than the executable license fee. (App. A46)

infringement damages. (App. A53 n.5)

The District Court failed to recognize the most basic computer industry practices of licensing of software. It calculated plaintiff's "actual damages" under 17 U.S.C. 504(b) (App. A96) as an executable license fee of $3,500[22] for each of the two infringing programs, rather than a source code licensing fee. Defendants copied source and object code not executables. This is not a case of the pirating and duplication of "off the shelf" retail software such as VIDEOGRAM 2.0. It is a case of defendants' copying the much more valuable source and object code used to create "off the shelf" retail products. For example pirating the "off the shelf" software package Windows 95(tm) with a retail value of perhaps $100 is not the same as copying the source and object code for Windows 95(tm).

The other prong of the court's reasoning was that since a source code license is considerably more expensive than an executable license it was "unlikely that Dragon would pay such a high fee." (App. A46).

The court reveals its true intent with words buried in a footnote. "At any rate, the measure used makes little difference, since plaintiff cannot receive a double recovery when the damages are co-extensive." (App. A53 n.5)

The court is saying, in essence, that it makes no difference what larger or more substantial awards are available under trade secret law, it will award only the copyright damage.

By denying Softel the greater benefits available under state law, the District Court effectively extinguished and pre-empted Softel's trade secret claim in violation of 17 U.S.C. Sec. 301(b)(3).

Copyright damages in this case cannot be co-extensive with trade secret damages because the copyright calculation did not include the market value of the stolen source code and is only a fraction of the cost of what Softel lost: exclusive control of its trade secret.

The court then calculated defendants' profits as the same amount awarded as defendants profits under the Copyright act. After reducing Dragon's gross revenues of $209,715 for actual expenses, the infringers' salaries, and overhead, to $54,880, the

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[22] Softel's licensing agreement charged $6000 for an executable licensing fee.

court cut this amount in half for "apportionment" leaving $27,440 as Dragon's restitution for theft of Softel's source code, its core technology and the heart of its business.

The District Court cited no authority other than dicta in Altai that copyright and trade secret damages may be co-extensive. The District Court's application of that dicta in this case reflects its understanding that Second Circuit policy is to favor the software pirate and provide only limited compensation to the aggrieved computer software owner.

2. In the Court of Appeals

The Second Circuit Court of Appeals vacated the District Court's application of the A-F-C test to determine the copyrightability of the overall design and structure of Softel's Authoring Language, but left standing the uncopyightability of the underlying original fixed expression in 70% of the Softel program's source and object code. It remanded for findings of whether the manner in which Softel combined the various design elements was protectable expression, and, if so, whether it was infringed. (App. A79)

However, the Second Circuit did not clarify what test is to be applied to determine the copyrightability of the combination of various design elements. On the one hand, it notes that there is a question of "how many ways existed to design a computer program with the same functionality as Softel's." (Id. A77) This suggests the traditional idea/expression merger doctrine. If there are other ways to design such a program, Softel's design choice is copyrightable expression. The court also looks to the traditional "originality" test. Noting Fiondella's general description of the interrelationship of the key design elements, the court states that when combined with defendants inclusion of all 15 of Softel's commands, there is "a colorable claim that there is a modicum of expression in the design of the program and that Dragon infringed that expression". (Id.)

On the other hand, the Second Circuit also refers to the Altai "filtering" criteria as the criteria the court should apply to determine copyrightability and merely criticizes the District Court for having "failed to apply the Altai test to the interrelationship among the design elements". (Id. A79)

Even the Second Circuit is confused as to how to determine copyrightability.

The Second Circuit did not disturb the District Court's failure to grant copyright and trade secret protection to the over 2000 lines

of code that implemented the design elements.(Id. A76) For example, the Second Circuit noted the fifteen English language commands that Fiondella described in testimony. These external commands in data files cued routines and code modules in the computer program. (Id. A77) Darsee admitted studying all of this Softel computer code and by doing so he learned the design and structure of Softel's computer program.

Neither the District Court nor the Second Circuit explained on what basis consistent with established principles of copyright law and trade secret law Darsee was free to study and copy these thousands of lines of code.

Neither court explained how Altai "filtering" criteria such as "dictated by logic and efficiency", "external considerations" or "common programming techniques" can properly be used to deny trade secret protection for those lines of code (Id. A35, A81) when trade secret protects any secret information used in one's business to obtain a competitive advantage. Restatement of Torts, Sec. 757, cmt. b. (1937)

The Second Circuit's remand for findings on whether there is a trade secret in the combination of the design elements comprising the structure of the Softel Authoring Language (App.A81), independent of the source code which embodies that structure, ignores settled principles of trade secret law. Under trade secret law, liability attaches on proof of (1) the existence of a trade secret and (2) defendants' commercial use of the secret. University Computing Co. at 539. Once those elements are proven, all subsequent similarly functioning products are presumed the result of the infringement and come within any injunction or damage calculation unless proven that they were developed independent of the stolen secret by using a "clean room". Davidson (supra.) at 432; Altai, 775 F.Supp. at 562 Since Darsee created the pre-litigation and the post-litigation programs (Id. A20), all of the post-litigation programs in this case come within the damage calculation as a matter of law.

The Second Circuit affirmed the District Court's refusal to calculate trade secret damages based on a reasonable royalty including development costs (Id. A83)[23] It affirmed the lower court's

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[23]The court erroneously describes the "reasonable royalty" and the unrestricted source code license as alternative damage calculations. In fact they are the same: a reasonable royalty is based on development costs of the source code times a

holding that trade secret and copyright damages were co-extensive and that Softel can receive only the copyright damages of $34,440 for the theft of a trade secret costing over $238,000 to develop. In so doing, the Second Circuit pre-empted Softel's trade secret claim and transferred Softel's property interest in the trade secret source code to the defendants.

The Appeals Court opined that damages recouping development costs would "improperly" compensate Softel for "potential loss" and that Dragon's net profits further reduced by "apportionment", is the only proper award if the secret was not "totally" destroyed through publication and Softel could continue to use the secret in its business. (Id. A83)

The Second Circuit ruling ignored U.S. Supreme Court precedent in Ruckelshaus v. Monsanto Co., 104 S. Ct. 2862, 2877 (1984) which held that the holder of a trade secret has a property interest which is the reasonable investment backed expectation that the owner and only the owner will control the use and dissemination of the secret. Once the right to exclude others-- whether one person, a few, or the world-- from using the trade secret is lost, the owner has lost its property interest whether or not the owner can continue to use the secret simultaneously with those who misappropriated it.

Ruckelshaus makes clear that a trade secret is qualitatively different from non-secret information and that a trade secret owner has a constitutionally recognized property interest in its exclusive control of that secret. If the government's use of the trade secret without the owner's permission constituted a government taking requiring just compensation of the value of the secret, then certainly Darsee and Dragon's willful theft and unlawful use mandates the same restitution of, at a minimum, the taking of Softel's investment.

Under the Second Circuit ruling, defendants can steal plaintiff's trade secret costing over $238,000 to develop, use it in all of their interactive computer programs, and pay plaintiff only $27,440. In

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multiplier to reflect a return on the investment, especially where, as here, the defendants exercised complete dominion and control over the secret, used it over a period of years as the foundation of their interactive media business, removed Softel's copyright notice, and represented it as their own creation. The reasonable royalty is based upon the intended use of the secret by the defendants. University Computing Co. at 536, 537 n.31.

allowing defendants to obtain a permanent right[24] to use plaintiff's trade secret at 1/10th plaintiff's development costs and at 1/30th to 1/40th of the reasonable value of an unrestricted source code license, the Second Circuit has transferred the plaintiff's property interest in its trade secret to defendants.

Copyright and trade secret damages in this case are not co-extensive because the copyright damage calculation does not include restitution[25] of the value of the stolen trade secret. The Second Circuit's ruling is a *de facto* preemption of Softel's trade secret which contravenes Congress's intent that computer programs enjoy dual protection under copyright and trade secret law. House Report No.1307 at 6482-83. Its limitation of the trade secret protection to a fraction of the stolen code and its calculation of trade secret damages at a fraction of the stolen secret's value exemplifies the Second Circuit's hostility to the protection of computer software and its intent, unless checked by the United States Supreme Court, to deny protection and proper compensation for the most blatant software piracy.

REASONS FOR GRANTING THE PETITION

Congress, by the 1976 revisions and 1980 amendments to the Copyright Act, intended copyright protection for computer programs as literary works. In so doing, Congress recognized that the creative development process of computer programs was more akin to literary authorship than to scientific or patentable invention.

CONTU, in its advisory role to Congress, concluded that copyright was best suited to effectuate the public interest because of its universal availability to all computer programs. (CONTU Report at 20-21) It rejected patent as inappropriate because it was doubtful that computer programs were patentable, and even if they theoretically were, "only those that are truly novel and non-obvious will be protected." Moreover, trade secret protection would be lost because the program's trade secret source code is disclosed in the patent application. (*Id.* at 42,47 n. 1 and n.10)

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[24] The District Court did not issue the requested permanent injunction, thus leaving defendants in permanent possession and control of Softel's trade secret.

[25] Softel's supplemental proposed findings of fact addressed the issue of "double recovery". It requested an award of development costs of $238,000 as actual damages under 17 U.S.C. 504(b) and provided the amount be deducted from the trade secret damage award of a reasonable royalty calculated as development costs times a multiplier of 3.5 to 5.5.

In Altai, the Second Circuit expressed its preference for patent protection for computer programs *Id.* at 712. It then adopted "filtering" criteria which raised the bar for copyright protection to patent-like levels of "novelty" and "non-obviousness" by denying protection to original expression that implemented software, hardware or industry standards or common programming practices. Incongruently, it also denied protection to original expression that was logical or efficient, the very hallmarks of a superior (and presumable more valuable) program.

Neither the Second Circuit nor D. Nimmer discuss what evidence other than the broad and vague opinions of an expert witness is required to establish "uncopyrightability" under the Altai "filtering" criteria. The result is that the expert is offering opinion on the legal question of "copyrightability" and the issue becomes the "credibility" of the expert.

Although the Second Circuit criticized Whelan's analysis as "overbroad", its "filtering" criteria are also "overbroad", albeit in favor of the infringer. The result in this case, where the Second Circuit denied copyright and trade secret protection to 70% of Softel's original computer program which defendants admitted copying, is a logical extension of the Second Circuit's anti-copyright protection policy; its use of broad and ambiguous "filtering" criteria in lieu of the traditional copyrightability tests; and the lack of clear standards of evidence or explicit methodology for applying those questionable criteria. The Second Circuit's application of those copyright criteria to deny trade secret protection and its use of copyright damages criteria to preclude greater compensation under trade secret law constitutes a *de facto* preemption of state trade secret law which Congress intended to co-exist with copyright protection.

It is clear that the current state of copyright protection for computer programs, especially where defendants admit copying, is in chaos and has veered far from the course Congress established.

As noted in an article entitled Uncertainty Reigns in Software Cases by Ronald S. Katz and Lateef Matima in the The National Law Journal, May 12, 1997 at p. C46:

> The debate over the length and breadth of protection that is, or should be, afforded computer programs and software under the federal copyright and other laws continues to rage in law and business circles. Fueling this conflagration is the ambiguity, and even outright inconsistency, in the developing jurisprudence of copyright protection for such

creative-functional works. While the courts, and occasionally Congress, struggle to accommodate unrelenting technological advances, copyright owners and business competitors alike remain without guidance as to their legal rights.

It well may be that the trial and appellate courts have gone as far as possible to map out possible avenues through this new terrain, and that a definitive course needs to be set by the U.S. Supreme Court. Until the high court acts, the public interest will continue to be unread tea leaves.

POINT I

THE COURT OF APPEALS DECISION DENYING COPYRIGHT PROTECTION TO ORIGINAL SOURCE CODE EXPRESSION BASED UPON ITS NOVEL "FILTERING" CRITERIA CONFLICTS WITH AT LEAST THREE CIRCUITS.

The Third Circuit's application of the traditional originality and idea/expression merger test prevailed as the proper analytical method for determining copyright protection of both computer code and the design and structure of that code into a working, functional program until the Second Circuit decision in Computer Associates Intern., Inc. v. Altai, Inc. In Altai, the Second Circuit used the "A-F-C" test and the "filtering" criteria to determine copying as a factual matter where there was no literal code similarity and defendant claimed "independent creation".

In this case,, the Second Circuit expanded the use of the novel Altai "filtering" criteria. Defendants made no claim of independent creation and admited verbatim copying of source and object code. The Second Circuit affirmed the District Court's use of the Altai "filtering" criteria to deny copyright protection to thousands of lines of original source code and to the trade secrets embodies in this code.

The Third Circuit has not adopted the A-F-C test and Altai "filtering" criteria. It continues to follow the traditional originality and idea/expression merger tests articulated in the Apple and Whelan cases.

The First Circuit in Lotus Development Corp. v. Borland Intern., Inc.. 49 F.3d 807, 814 (1st Cir. 1995) stated that the A-F-C test applied only to the analysis of infringement of non-literal elements of a computer program where defendants allege independent

creation. It rejected Altai as a broad rule or analytical method. In Data General Corp. v. Grumman Systems Support Corp., 825 F.Supp. (D. Mass. 1993), the District Court refused to apply the Altai "filtering" criteria or the A-F-C test where defendants admitted verbatim copying of Data General's entire program.

The Tenth Circuit, in Gates Rubber Co. v. Bando Chemical Industries, Ltd., 9 F.3d 823, 828 (10th Cir. 1993) adopted the A-F-C test and the Altai "filtering" criteria, but noted that source and object code would almost always be found to be protectable expression unless it merged with the idea. *Id.* at 836 [26] The Tenth Circuit did not articulate a test or identify the requisite evidence for proving uncopyrightability under the Altai "filtering" criteria.

In Control Data Systems v. Infoware, Inc., 903 F. Supp. 1316 (D. Minn. 1995), the Court cited Gates Rubber. However, while it claimed to apply "filtering" criteria to the similar program elements: 2000 lines of copied source code, input/output formats, file layouts, source code parameters and commands, it actually applied the traditional idea/expression merger test. Finding that because there are many different ways in which the copied elements could have been expressed to accomplish the purpose of the program, those elements were individually protectable.

The Eleventh Circuit in Bateman v. Mnemonics, Inc., 79 F.3d 1532 (11th Cir. 1996) followed the lead of Judge Cannella in this case and endorsed the use of the Altai "filtering" criteria where defendants admit deliberate copying of plaintiff's source code in the design and development of their product. The Eleventh Circuit characterized the "filtering" criteria as "generally recognized challenges" to the requirement of originality. *Id.* at 1545 The court does not explain how original source code expression within the meaning of Feist becomes "unoriginal" expression because it effectuates "compatibility" or "efficiency" or implements "standard programming techniques".

What the Eleventh Circuit calls "recognized challenges to literal code copying" are in fact criteria introduced by one influential lawyer/author and adopted by the Second Circuit for the express purpose of destroying the broad copyright protection that Congress

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[26] In Gates Rubber, there was no verbatim copying of code and the defendant alleged independent creation. The Court ruled that plaintiff's "constants" were uncopyrightable "facts", but upheld the district court finding that they were valuable trade secrets costing over $500,000 and 25,000 man-hours to develop. The court maintained the distinction between copyright and trade secret protection.

intended and replacing that protection with a patent-like standard of novelty or, worse, a standard of copyright "worthiness" with merit arbitrarily determined by the court.

POINT II

THE CIRCUIT COURTS ARE UNABLE TO REACH A CONSENSUS ON THE QUESTION OF IMPORTANT FEDERAL LAW DECIDED BY THE COURT OF APPEALS AND THEREFORE THE PUBLIC INTEREST REQUIRES THIS COURT'S REVIEW.

In the ten years that have passed since the Third Circuit decision in Whelan Assoc., Inc. v. Jaslow Dental Laboratories, Inc. the Circuit Courts are more confused than ever and gravely inconsistent in their understanding of the scope of copyright protection for computer programs, the legal standards by which copyright protection is determined, and the analytical method, evidence or tests to be used to determine whether the standards are met.

The Circuit Courts have failed to reach a consensus and uniformly apply copyright law to the protection of computer programs. The result is that the grant or denial of copyright protection depends on fortuities of forum and venue. The Altai "filtering" criteria of "external factors", "common programming techniques", "compatibility requirements" and "dictated by logic and efficiency" are nothing more than an ambiguous and vague terminology that allow the denial of copyright protection to original expression against the will of Congress. Under these amorphous and ambiguous "standards", willful and deliberate infringers, the most blatant of software thieves can escape liability.

A proper analytical methodology for computer programs consistent with traditional copyright analysis of literary works is not as elusive as the Second Circuit suggests.

The criticism of Whelan was that it applied the idea/expression merger test at the highest level of abstraction - the idea of the program which was defined as the program's purpose. At the time of the Whelan decision a copyright plaintiff had to prove (1) ownership of a valid copyright and (2) copying. The first prong is easily proven since the copyright registration is *prima facie* proof of a valid copyright under 17 U.S.C. 410(c). After the Whelan decision, this Court re-phrased the second prong as proof of "copying of constituent elements that are original" Feist at 361.

(Emphasis added.)

Combining Whelan, and Feist and the traditional test of idea/expression merger, a proper methodology would first determine whether there is direct evidence of copying. If there is an admission of copying, the court proceeds to determine whether the copying, qualitatively or quantitatively consitutes an "illicit appropriation".

The only challenge where there is an admission of copying is that the copied elements are not original within the meaning of Feist or that the copied element "merged" with the idea because it is the only way to express that element. As noted in Control Data, supra. the test whether a program's constituent element is "necessary" to the program and merged with the idea is whether there were alternative expressions available to plaintiff's programmer. If so, the programmer's choices, whether embodied in the code or the organization of that code. is protectable copyrightable expression. Broad allegations by a hired expert that a plaintiff's design decisions or specific code instructions are "efficient" or "logical" or "dictated" by general hardware, software, or industry standards cannot be a basis for permitting copying of plaintiff's work.

If the Second Circuit's decision is allowed to stand no computer software developer can be certain that its creative efforts will be protected from blatant software piracy. As the courts have chipped away at the broad protection that Congress intended, the result in this case, denial of copyright and trade secret protection to 70% of the code defendants admit copying, is not a surprising result. Without intervention by this court, intellectual property protection for computer programs will continue to erode and piracy and unfair business practices will be the rule rather than the exception. This court's guidance, therefore, seems imperative.

Conclusion

The petition for a writ of certiorari should be granted.

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Respectfully submitted

Charla R. Bikman
Counsel for Petitioner
25 Maple Lane
East Hampton, NY 11937
(516) 324-1306